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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,476	04/18/2001	Jerry Prismantas	060783/P003US-10102074	9931

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EXAMINER

NGUYEN, LEE

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 06/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,476

Applicant(s)

PRISMANTAS ET AL.

Examiner

LEE NGUYEN

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6-7, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Bantz et al. (US 5,394,433).

Regarding claim 1, Bantz teaches an RF data transfer system, comprising: means for detecting and characterizing interference with data transfer and means for adjusting the RF transmission to avoid the interference (col. 18, line 51 through col. 19, line 40).

Regarding claim 6, Bantz also teaches means for analyzing interference (fig. 20).

Regarding claim 7, Bantz teaches reducing RF interference, comprising the steps of: calculating characteristics of RF interference within a band of interest and storing in an interference profile (col. 18, lines 55-60, col. 15, line 35 through col. 16, line 20); adjusting desired transmissions to

accommodate the interference profile (col. 18, line 51 through col. 19, line 40).

Regarding claim 15, Bantz also teaches frequency hopping (abstract).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz in view of Poyhonen (WO 93/22850).

Regarding claim 2, Bantz fails to teach shifting a sequence of time slots. Poyhonen reduces interference in an RF communication system by shifting a sequence of time slots (time slot hopping, col. 12, lines 10-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Poyhonen to the communication system of Bantz in order to maximize interference diversity.

6. Claims 3, 9, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz in view of Petranovich et al. (US 5,946,624).

Regarding claims 3, 9, 18, Bantz fails to teach skipping or eliminating at least one time period in a sequence of time period. Petranovich teaches that in order to reduce interference, skipping at least one time period in a sequence of time period (fig. 6, see T'1 of cell A). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Petranovich to the communication system of Bantz in order to reduce interference.

7. Claims 4, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz in view of Alamouti et al. (US 5,993,421).

Regarding claims 4, 11-12, Bantz fails to teach changing modulation rate. Alamouti teaches that in order to increase the system's capacity, the modulation needs to be changed (col. 14, lines 34-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Alamouti to the communication system of Bantz in order to enhance channel capacity.

8. Claims 5, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz in view of Lemson (US 5,655,217).

Regarding claims 5, 8, Bantz fails to teach using an addition antenna for detecting interference. Lemson teaches using an addition antenna 24 (fig. 1) for detecting interference . It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Lemson to the communication system of Bantz in order to enhance the detection of interference.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz in view of Smith et al. (US 6,366,573).

Regarding claim 10, Bantz fails to teach reducing in time one of the slot during interference. Smith teaches reducing in time one of the slot during interference (col. 5, lines 57-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Smith to the communication system of Bantz in order to save processing time.

10. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz.

Regarding claims 13-14, Bantz fails to teach different antenna or different hub. It is taken official notice that the art of implementing space and macro-diversity is conventionally well known. The purpose for providing those is to enhance channel quality.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz in view of Przelomiec (US 5,960,351).

Regarding claim ¹⁶~~2~~, Bantz fails to teach changing channel width.

Przelomiec reduces interference in an RF communication system by changing channel width (col. 16, lines 7-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Przelomiec to the communication system of Bantz in order to minimize interference.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz in view of Lund (US 5,844,934).

Regarding claim ¹⁷~~2~~, Bantz fails to teach changing channel polarity.

Lund reduces interference in an RF communication system by changing channel polarity (col. 22, lines 10-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Lund to the communication system of Bantz in order to minimize interference.

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz in view of Chang et al. (US 5,956,638).

Regarding claim 19, Bantz teaches reducing RF interference, comprising the steps of: detecting and characterizing interference with data transfer including narrowband and periodic wideband interference (fig. 20) and for adjusting the RF transmission to avoid the interference including changing the frequency of transmissions (col. 18, line 51 through col. 19, line 40). Bantz only differs from the claimed invention in that the unlicensed band is used. Chang teaches monitoring channels having interference characteristics for used in unlicensed band (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wireless network of Bantz with the unlicensed band of Chang so that interference can be reduced in the unlicensed band.

14. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bantz in view of Chang et al. as applied to claim 19 above and further in view of Lemson (US 5,655,217).

Regarding claims 5, 8, Bantz fails to teach using an addition antenna for detecting interference. Lemson teaches using an addition antenna 24 (fig. 1) for detecting interference. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Lemson to the communication system of Bantz in order to enhance the detection of interference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is (703)-308-5249. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on (703) 308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

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LEE NGUYEN *Lee 6/12/02*
Primary Examiner
Art Unit 2683